List of the Claims

1-24. (Cancelled)

25. (Withdrawn) A method for modifying an environment of a cell associated with a disorder using a genetically altered chondrocyte, comprising:

providing a genetically altered chondrocyte , wherein the genetically altered chondrocyte has been altered to express a therapeutic agent;

delivering the genetically altered chondrocyte to the environment of a cell with a disorder such that the genetically altered chondrocyte does not become structurally functional in the environment surrounding the cell; and

expressing the therapeutic agent to a level sufficient to modify the environment surrounding the cell.

26. (Withdrawn) The method of claim 25, wherein the genetically altered chondrocyte, is genetically altered to produce a therapeutic agent selected from the group consisting of a protein, an agonist or an antogonist of an antibody, an antigen, a hormone, an anti-inflammatory agent, an antiviral agent, and anti-bacterial agent, a growth factor, a cytokine, an oncogene, a tumor suppressor, a transmembrane receptor, an adhesion molecule, a neurotransmitter, a morphogenetic protein, a differentiation factor, an enzyme, and an extracellular matrix protein.

27. (Withdrawn) The method of claim 25, wherein the therapeutic agent is an Erythropoietin protein.

28. (Withdrawn) The method of claim 25, wherein the therapeutic agent is an Erythropoietin mimetibody.

29. (Withdrawn) The method of claim 25, wherein the cell associated with the disorder is in an atypical chondrocyte environment.

30. (Withdrawn) The method of claim 29, wherein the atypical chondrocyte environment is in an organ selected from the group consisting of the brain, heart, liver, kidney, gastro-intestinal tract, spleen, smooth and skeletal muscles, eye, ganglions, lungs, gonads, and pancreas.

31. (Withdrawn) The method of claim 29, wherein the atypical chondrocyte environment is an an aqueous environment selected from the group consisting of blood and plasma.

32. (Withdrawn) The method of claim 25, wherein the target region is in a typical chondrocyte environment.

33. (Withdrawn) The method of claim 32, wherein the typical chondrocyte environment is selected from the group consisting of bone, tendon, and cartilage.

34. (Withdrawn) The method of claim 25 further comprising mixing the genetically altered chondrocyte with a biocompatible substrate.

35. (Withdrawn) The method of claim 34, wherein the biocompatible substrate is a gel matrix substrate.

36. (Withdrawn) A method for ameliorating a disorder or injury in a subject using a genetically altered chondrocyte, comprising:

providing a genetically altered chondrocyte, wherein the genetically altered chondrocyte has been altered to express a therapeutic agent;

implanting a biocompatible substrate comprising a genetically altered chondrocyte into a target region of the subject, wherein the genetically altered chondrocyte is not structurally functional in the target region or an environment surrounding the target region; and

expressing the therapeutic agent in the target region at a level sufficient to ameliorate the disorder.

37. (Withdrawn) The method of claim 36, wherein the target region is in an atypical chondrocyte environment.

38. (Withdrawn) The methods of claim 37, wherein the atypical chondrocyte environment is in an organ selected from the group consisting of the brain, heart, liver, kidney, gastro-intestinal tract, spleen, smooth and skeletal muscles, eye, ganglions, lungs, gonads, and pancreas.

39. (Withdrawn) The methods of claim 37, wherein the atypical chondrocyte environment is an an aqueous environment selected from the group consisting of blood and plasma.

40. (Withdrawn) The method of claim 36, wherein the target region is in a typical chondrocyte environment.

41. (Withdrawn) The method of claim 40, wherein the typical chondrocyte environment is selected from the group consisting of bone, tendon, and cartilage.

42. (Withdrawn) The method of claim 36, wherein the step of implanting the biocompatible substrate comprises implanting a gel matrix substrate.

43. (Withdrawn) The method of claim 42, wherein the gel matrix substrate is selected from the group consisting of alginate, polysaccharide, and agarose.

44. (Withdrawn) The method of claim 42, wherein the dimensions of the implanted gel matrix substrate determines the concentration of chondrocytes within the gel matrix substrate that are available to express the therapeutic agent.

45. (Withdrawn) The method of claim 44, wherein the concentration of chondrocytes in the gel matrix substrate is about 100,00 to 10 millions cells per ml in a gel matrix volume of 0.05ml to 10 ml.

46. (Withdrawn) The method of claim 36, wherein the disorder is selected from the group consisting of a blood disorder, an autoimmune disorder, a hormonal disorder, an anti-inflammatory disorder, a fertility disorder, and an neurodegenerative disorder.

47. (Withdrawn) The method of claim 36, wherein the injury is selected from the group consisting of a wound, a bone defect, a cartilage defect, a skin wound, and a torn ligament.

48. (Currently Amended) A composition comprising:

(a) a biocompatible substrate; and

(b) a genetically altered chondrocyte modified to express a therapeutic agent in a target region associated with a disorder;

wherein the target region is an ectopic site and wherein the composition is capable of delivering the therapeutic agent at a level sufficient to ameliorate the disorder and the genetically altered chondrocyte does not perform the function of cartilage tissue and is not used for tissue repair or construction.

49. (Previously Presented) The composition of claim 48, wherein the composition does not become part of the ectopic target region.

50. (Previously Presented) The composition of claim 48, further being adapted to deliver the therapeutic agent to an environment surrounding a cell associated with a disorder, and being capable of modifying the environment surrounding the cell.

51. (Previously Presented) The composition of claim 48, wherein the chondrocyte produces a therapeutic agent selected from the group consisting of a protein, an antibody, a mimetibody, an antigen, a hormone, an anti-inflammatory agent, an antiviral agent, an anti-bacterial agent, a growth factor, a cytokine, an oncogene, a tumor suppressor, a transmembrane receptor, an adhesion molecule, a neurotransmitter, a morphogenetic protein, a differentiation factor, an enzyme, and an extracellular matrix protein.

52. (Previously Presented) The composition of claim 48, wherein the therapeutic agent is an Erythropoietin protein.

53. (Previously Presented) The composition of claim 48, wherein the therapeutic agent is an Erythropoietin mimetibody.

54. (Previously Presented) The composition of claim 48, wherein the ectopic site is in a site in an organ selected from the group consisting of the brain, heart, liver, kidney, gastro-intestinal tract, spleen, smooth muscles, skeletal muscles, eye, ganglions, lungs, gonads, and pancreas.

55. (Previously Presented) The composition of claim 48, wherein the ectopic site is an aqueous environment selected from the group consisting of blood and plasma.

56. (Previously Presented) The composition of claim 48, wherein the biocompatible substrate is gel matrix substrate.

57. (Previously Presented) The composition of claim 56, wherein the gel matrix substrate is selected from the group consisting of alginate, polysaccharide, and agarose.

58. (Previously Presented) The composition of claim 56, wherein the dimensions of the implanted gel matrix substrate determines the concentration of chondrocytes within the gel matrix substrate that are available to express the therapeutic agent.

59. (Previously Presented) The composition of claim 56, wherein the concentration of chondrocytes in the gel matrix substrate is about 100,00 to 10 million cells per ml in a gel matrix volume of 0.05 ml to 10 ml.